ELECTROCHIMICA Acta

THE JOURNAL OF THE INTERNATIONAL SOCIETY OF ELECTROCHEMISTRY

VOLUME CONTENTS AND AUTHOR INDEX

VOLUME 34 (1989)

PERGAMON PRESS *Oxford New York*
Beijing Frankfurt São Paulo Sydney Tokyo Toronto

ELECTROCHIMICA ACTA

Published by Pergamon Press plc for the International Society of Electrochemistry (I.S.E.)

Editor-in-Chief

R. D. ARMSTRONG

ELECTROCHEMISTRY RESEARCH LABORATORIES, SCHOOL OF CHEMISTRY,
UNIVERSITY OF NEWCASTLE UPON TYNE, NEWCASTLE UPON TYNE NE1 7RU, ENGLAND
(Tel: +44 91 2226000; Ext. 7858 or 6782. Fax: +44 91 2226929)

Assistants to the Editor-in-Chief: **G. W. D. BRIGGS** and **Mrs M. DODDS**, University of Newcastle upon Tyne

North American Editor

E. J. CAIRNS

APPLIED SCIENCE DIVISION, BUILDING 90,
LAWRENCE BERKELEY LABORATORY, UNIVERSITY OF CALIFORNIA,
BERKELEY, CA 94720, U.S.A.
(Tel: +1 415 4865028. Fax: +1 415 4865172)

Associate Editors

A. BEWICK
Southampton, England

E. BUDEVSKI
Sofia, Bulgaria

G. CAUQUIS
Grenoble, France

M. FROMENT
Paris, France

H. GERISCHER
Berlin, F.R.G.

F. GOODRIDGE
Newcastle upon Tyne, England

R. HAASE
Aachen, F.R.G.

Y. ITO
Kyoto, Japan

R. E. W. JANSSON
St. Louis, U.S.A.

K. V. KORDESCH
Graz, Austria

J. KORYTA
Prague, Czechoslovakia

L. I. KRISHTALIK
Moscow, U.S.S.R.

D. LANDOLT
Lausanne, Switzerland

J. OSTERYOUNG
Buffalo, New York, U.S.A.

S. K. RANGARAJAN
Bangalore, India

D. W. SHOESMITH
Pinawa, Manitoba, Canada

S. TRASATTI
Milan, Italy

W. VIELSTICH
Bonn, F.R.G.

Production Editor: **P. J. TURTON**, Pergamon Press plc, Oxford

---

Publishing and Advertising Offices: Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, U.K. (*Tel:* +44 865 64881; *Fax:* +44 865 741356), and Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A. Annual institutional subscription rate (1990): DM 1500.00. Two-year institutional rate (1990/91): DM 2850.00. Personal subscription rate for those whose library subscribes at the regular rate (1990): DM 231.00. Prices are subject to change without notice. Issued free to paid-up members of the International Society of Electrochemistry (ISE). Subscription enquiries from customers in North America should be sent to: *Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A.*, and for the remainder of the world to: *Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, U.K.*

Back Issues: Back issues of all previously published volumes in both hard copy and microform are available direct from Pergamon Press offices.

Copyright © 1989 Pergamon Press plc

It is a condition of publication that manuscripts submitted to this journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. However, assignment of copyright is not required from authors who work for organizations which do not permit such assignment. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the copyright holder.

The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984.

Photocopying information for users in the U.S.A.

The Item-Fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyright holder for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service provided the stated fee for copying beyond that permitted by Section 107 and 108 of the United States Copyright Law is paid. The appropriate remittance of $3.00 per copy per article is paid directly to the Copyright Clearance Center Inc., 27 Congress Street, Salem, MA 01970.

Permission for other use

The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the publisher for such copying.

The Item-Fee Code for this publication is: 0013-4686/90 $3.00 + 0.00

VOLUME 34 (1989)

CONTENTS

JANUARY

ELECTRODYNAMICS AND QUANTUM PHENOMENA AT INTERFACES

GUEST EDITORS: J. W. SCHULTZE and J. ULSTRUP

	i	I.S.E. Pages
J. W. SCHULTZE and J. ULSTRUP	1	Editorial
Review Articles		
V. B. SANDOMIRSKII, V. A. VOLKOV, G. R. AIZIN and S. A. MIKHAILOV	3	Some properties of two-dimensional electron systems at semiconductor interfaces
E. V. CHULKOV, V. M. SILKIN, A. G. LIPNITSKII and V. E. PANIN	19	The first-principles calculations of the electronic structure of the surfaces of pure metals and layers adsorbed on their surfaces
A. TADJEDDINE	29	Influence of the electrical polarization on the surface plasmon dispersion at metal–electrolyte interfaces
Research Papers		
W. AKEMANN and A. OTTO	35	Examination of the very low frequency inelastic light scattering spectrum of coldly condensed silver films
S. AMOKRANE and J. P. BADIALI	39	A model for the determination of the distance of closest approach of a solvent molecule to a metal surface—application to a silver electrode
A. R. NEWMARK and U. STIMMING	47	Photoelectrochemical properties of ion-implanted hafnium dioxide films
SH. M. KOGAN and A. F. POLUPANOV	57	The energy spectrum of photoelectrons emitted from a semiconductor with negative electron affinity
M. F. GOLOVKO, S. N. BLOTSKY and O. A. PIZIO	63	On the application of optimized cluster series for the description of the electrolyte model near a charged hard wall
C. FRANKE, G. PIAZZA and D. M. KOLB	67	The influence of halide adsorption on the electronic surface states of silver electrodes
A. FELSKE and W. J. PLIETH	75	Raman spectroscopy of titanium dioxide layers
	79	Electrochemical Calendar

FEBRUARY

	i	I.S.E. Pages
Review Article		
G. INZELT	83	Role of polymeric properties in the electrochemical behaviour of redox polymer-modified electrodes
Review Article		
V. S. MARKIN and A. G. VOLKOV	93	The Gibbs free energy of ion transfer between two immiscible liquids
A. M. SUKHOTIN, M. S. GRILIKHES and E. V. LISOVAYA	109	The influence of passivation on the kinetics of the dissolution of iron—I. Outer layer of the passivating film as a heavy doped thin semiconductor and Mott–Schottky equation
A. M. SUKHOTIN, M. S. GRILIKHES and E. V. LISOVAYA	113	The influence of passivation on the kinetics of the dissolution of iron—II. Proton transfer and the pulse anode effect on passive iron

M. Salmón, M. Saloma, G. Bidan and E. M. Genies	117	Route to chemically modified chiral electrodes: synthesis and properties of optically active pyrrole monomers
M. Kadeřávek and I. Paseka	121	Electrochemical and XPS studies of the properties of oxide layers formed on a platinum electrode by anodic polarization in pure H_2SO_4 and in $(H_2SO_4 + CNS^-)$
J. M. Marioli, J. J. Silber and L. Sereno	127	Anodic oxidation of 1-naphthylamine in methylene chloride—temperature effects
G. Kokkinidis, M. Papadopoulou and A. Varvoglis	133	Electrochemical reduction of [bis(acyloxy)iodo]arenes
D. Aurbach and H. Gottlieb	141	The electrochemical behavior of selected polar aprotic systems
Li Yongfang and Wu Haoqing	157	Theoretical treatment of kinetics of intercalation electrode reaction
L. J. J. Janssen	161	Behaviour of and mass transfer at gas-evolving electrodes
T. Pajkossy and L. Nyikos	171	Diffusion to fractal surfaces—II. Verification of theory
T. Pajkossy and L. Nyikos	181	Diffusion to fractal surfaces—III. Linear sweep and cyclic voltammograms
E. Ahlberg and M. Friel	187	The anodic dissolution of iron in acidic acetonitrile–water solutions
G. Horányi and E. M. Rizmayer	197	Induced adsorption of ^{45}Ca labelled Ca^{2+} ions—a tool for the indirect radiotracer study of the adsorption of some organic acids at platinized platinum electrodes
A. Di Paola	203	Semiconducting properties of passive films on stainless steels
I. Yamanaka and K. Otsuka	211	The electrochemically promoted formations of formaldehyde and dimethyl ether during electrocatalytic oxidations of methanol and methylal
P. Fiordiponti and G. Pistoia	215	An impedance study of polyaniline films in aqueous and organic solutions
P. Nunziante and G. Pistoia	223	Factors affecting the growth of thick polyaniline films by the cyclic voltammetry technique
J. A. Bardwell and B. MacDougall	229	Involvement of surface oxide films on iron in halide-induced pitting
E. Hämeenoja, T. Laitinen, G. Sundholm and A. Yli-Pentti	233	The growth of oxide layers on lead and its alloys at a constant potential in the PbO_2 potential region at different temperatures
J. H. Zagal and C. Páez	243	Catalytic electrooxidation of 2-mercaptoethanol on a graphite electrode modified with metal–phthalocyanines
X.-Z. You, Z.-F. Ding, X. Peng and G. Xue	249	(2-Formyl-1-chlorovinyl)ferrocene film electrode prepared by electrochemical polymerization
C. M. Rangel, R. A. Leitão and I. T. Fonseca	255	Voltammetric studies of the transpassive dissolution of mild steel in carbonate/bicarbonate solutions
A. Popov, N. Dimitrov, O. Velev, T. Vitanov, E. Budevski, E. Schmidt and H. Siegenthaler	265	Non-equilibrium phenomena at the early stage of formation of lead underpotential adsorbates on electrolytically grown Ag(111) electrode surface
A. Popov, N. Dimitrov, D. Kashchiev, T. Vitanov and E. Budevski	269	A model of the structural transformation processes in lead adsorbate on Ag(111) faces at low coverages
T. Våland and P. A. Sjøwall	273	Properties and composition of surface films formed on steel in CO_2–aqueous solutions
C. A. Melendres, N. Camillone III and T. Tipton	281	Laser Raman spectroelectrochemical studies of anodic corrosion and film formation on iron in phosphate solutions
M. Vuković	287	Oxygen evolution on an electrodeposited ruthenium electrode in acid solution—the effect of thermal treatment

P. NIKITAS — 293 — An improved method for the calculation of excess free energies of surface solutions

Short Communication
J. MOIROUX — 297 — Effect of the addition of pyridine on the electrochemical oxidation of 3,5-dicyano-1,2,4,4,6-pentamethyl-1,4-dihydropyridine in acetonitrile

Book Review
O. R. BROWN — 299 — Graphite Fluorides (Studies in Inorganic Chemistry, 8). By N. Watanabe, T. Nakajima and H. Touhara

MARCH

i I.S.E. Pages

L. MÜLLER, M. KRENZ and K. RÜBNER — 305 — On the relation between the transport of electrochemically evolved Cl_2 and H_2 into the electrolyte bulk by convective diffusion and by gas bubbles

J. C. BAZAN and L. E. FASANO — 309 — On the kinetics of silver ion transfer at the solid–solid AgI–Ag interface

D. FERRY, Y. CASTRILLEJO and G. PICARD — 313 — Acidity and purification of the molten zinc chloride (33.4 mol%)–sodium chloride (66.6 mol%) mixture

J. L. CARBAJAL, R. E. WHITE, R. B. GRIFFIN and J. N. DUBROUILLET — 317 — Preliminary investigation on the corrosion behavior of amorphous $(Ti_{90}Ru_{10})_{87}Si_{13}$ in saline solutions

F. DI QUARTO, S. PIAZZA, R. D'AGOSTINO and C. SUNSERI — 321 — Amorphous semiconductor–electrolyte junction. Interference effects on the photocharacteristics of the a-Nb_2O_5–electrolyte junction

H. HAYASHI, K. UNO, Z. TAKEHARA and A. KATAGIRI — 329 — Studies on the bromine electrode in $ZnBr_2$–NaBr melts

A. LEWANDOWSKI and J. MALINSKA — 333 — Ionic solvation—V. Copper(I), silver(I) and gold(I) solvation in nitriles

L. DOUBOVA, G. MENGOLI, M. M. MUSIANI and S. VALCHER — 337 — Polyaniline as a cathode for O_2 reduction—kinetics of the reaction with H_2O_2 and use of the polymer in a model H_2O_2 fuel cell

R. E. F. EINERHAND, W. H. M. VISSCHER and E. BARENDRECHT — 345 — pH measurement in strong KOH solutions with a bismuth electrode

Y. SAKURAI and J. YAMAKI — 355 — Electrochemical reaction of α-$Cu_2V_2O_7$ with lithium in organic electrolyte

C. S. FUGIVARA, P. T. A. SUMODJO and T. RABOCKAI — 363 — Adsorption kinetics of *n*-propanol on platinized platinum electrode in sulphuric acid solution

D. G. LEAIST — 371 — Conductimetric measurement of ionic diffusion in porous media. Aqueous HCl, HNO_3 and H_2SO_4 in cation exchange columns

T. LAITINEN and J. P. POHL — 377 — The kinetics of oxide growth and oxygen evolution during potentiostatic polarization of lead in H_2SO_4 electrolytes—investigations on the temperature dependence

R. HAASE — 387 — Entropy balance for electrochemical multiphase systems

O. ENEA and J. P. ANGO — 391 — Molecular structure effects in electrocatalysis—I. Oxidation of polyols (C_2–C_6) on Pt and Au electrodes

J. SZYNKARCZUK, I. DRELA and J. KUBICKI — 399 — Electrochemical behaviour of chromium(III) in the presence of formic acid—I

J. M. CZAJKOWSKI and T. BLASZCZYK — 405 — The influence of the properties of the Helmholtz layer on the position of the diffused minimum of the differential capacity of the ideally polarizable electrode

D. M. DRUSKOVICH, I. M. RITCHIE, P. SINGH and Z. HONG-GUANG — 409 — The electrochemical oxidation of silver in chromate solutions

K. MAKSYMIUK and Z. GALUS — 415 — On the role of outer solvation shell in simple electron transfer reactions. Electrode processes of the $Co(en)_3^{3+/2+}$ couple in selected mixed solvents

M. C. Grossel, D. J. Edwards, D. B. Hibbert and H. el Nil — 425 The electrochemistry of some novel organic conductors and their precursors

R. S. Gonçalves, J.-M. Léger and C. Lamy — 433 Electrochemical studies of the adsorption of propargyl alcohol on a smooth platinum electrode in acid medium

A. Cyr, P. Huot, J.-F. Marcoux, G. Belot, E. Laviron and J. Lessard — 439 The electrochemical reduction of nitrobenzene and azoxybenzene in neutral and basic aqueous methanolic solutions at polycrystalline copper and nickel electrodes

I. Jakubec, J. Vondrák and J. Bludská — 447 Intercalation of alkali metals in chromium oxide–chloride

Y. Takasu, Y. Fujii, K. Yasuda, Y. Iwanaga and Y. Matsuda — 453 Electrocatalytic properties of ultrafine platinum particles for hydrogen electrode reaction in an aqueous solution of sulfuric acid

L. J. Li, M. Fleischmann and L. M. Peter — 459 Microelectrode studies of lead–acid battery electrochemistry

M. Fleischmann, L. J. Li and L. M. Peter — 475 Molecular level measurements of the kinetics of nucleation of α-PbO_2 on carbon microelectrodes

Short Communication
J. S. Jaworski — 485 Solvent effects on the Volta potential difference at the uncharged metal–solvent interface

489 Electrochemical Calendar

APRIL

R. N. O'Brien and K. S. V. Santhanam — 493 Onset of steady-state concentration profiles in laser interferometry during the oxidation of iodide at an electrodeposited polycarbazole electrode: formation of iodinated polycarbazole

M. M. E. Duarte, P. M. Taberner and C. E. Mayer — 499 Electrochemical behaviour of palladium/graphite and palladium/carbon systems

I. Jakubec, J. Vondrak and J. Bludska — 505 Intercalation of alkali metals in chromium oxide–chloride

M. Karolczak — 511 The possible errors in the determination of Gibbs electrosorption and adsorption energies

T. Hurlen, C. Simon, W. Wilhelmsen, S. Hornkjøl and E. Gulbrandsen — 519 Model studies on passive metal electrodes

K. Kim and T. Z. Fahidy — 525 A direct visualization study of anodically generated free convection—I. The electrochemical generation of Mn(III) ions

K. Kim and T. Z. Fahidy — 533 A direct visualization study of anodically generated free convection—II. The effect of anode characteristics, current density and magnetic fields on flow patterns

W. Gorski and Z. Galus — 543 Hydrolysis of vanadium ions (III, II) and polarographic behaviour of the V(III)/V(II) system in aqueous perchlorate solutions

P. Meisterjahn, U. König and J. W. Schultze — 551 Potentiostatic pulse measurements of oxide growth on zirconium

S. Chen, S. Cai, X. Chen, Y. Dong and T. Zhang — 563 Semiconductive properties and photoelectrochemistry of an iron oxide electrode—VII. Photoresponse observed in initial pitting period of iron passive film in acidic medium

J. O'M. Bockris and F. B. Diniz — 567 Aspects of electron transfer at a conducting membrane–solution interface

E. J. Vasini and M. C. Giordano — 577 Voltammetric study of competitive processes and detection of reaction intermediates in the Kolbe reaction at Pt electrodes

Short Communications
F. Maran, E. Vianello, G. Catelani and F. D'Angeli — 587 Electrochemical reduction of tetra-*O*-acetyl-α-D-glucopyranosyl bromide. A mild and quantitative synthesis of a glycal

A. LE MEHAUTE — 591 Fractal electrodes and constant phase angle response

Book Reviews
O. R. BROWN — 593 Carbon—Electrochemical and Physicochemical Properties. By K. KINOSHITA

K. E. HEUSLER — 593 Kinetics of Electrochemical Metal Dissolution. By L. KISS

J. KORYTA — 594 New Developments in Conductimetric and Oscillometric Analysis. By O. KLUG and B. A. LOPATIN

595 Electrochemical Calendar

MAY

i I.S.E. Pages

K. ASHLEY, D. B. PARRY, J. M. HARRIS, S. PONS, D. N. BENNION, R. LAFOLLETTE, J. JONES and E. J. KING — 599 Properties of electrochemically generated poly(*p*-phenylene)

R. ALBALAT, J. CLARET, E. GÓMEZ, C. MÜLLER and M. SARRET — 611 Electrocatalytic oxidation of mesoxalic acid on a polycrystalline platinum electrode in acid medium

J. GÓMEZ, L. VÁSQUEZ, A. M. BARÓ, C. L. PERDRIEL and A. J. ARVIA — 619 Scanning tunnelling microscopy and electrochemical response of electrofacetted gold electrodes

M. SAKAGUCHI, K. UEMATSU, A. SAKATA, Y. SATO and M. SATO — 625 Correlation between wettability of carbon carriers and activity of porous electrodes

S. IKONOPISOV, A. GIRGINOV and M. MACHKOVA — 631 Galvanoluminescence during the pore-filling of anodic films on aluminium formed in sulphuric acid

S. PANTALONI, S. PASSERINI, F. CROCE, B. SCROSATI, A. ROGGERO and M. ANDREI — 635 Electrochemical characterization of a class of low temperature conducting polymer electrolytes

E. R. GONZALEZ and A. J. MOTHEO — 641 The adsorption of formate and acetate ions on mercury electrodes from constant ionic strength solutions

T. P. DIRKSE — 647 A potentiodynamic study of the electrolytic formation of AgO

D. G. LEAIST — 651 Tracer diffusion of cobalt(II), nickel(II), copper(II) and hydrogen ions in aqueous sodium sulphate solutions

A. HEINZEL, R. HOLZE, C. H. HAMANN and J. K. BLUM — 657 The electrooxidation of methanol and formaldehyde at a platinum electrode: A SEESR study of radical intermediates—I

M. I. DA SILVA PEREIRA, M. J. B. V. MELO, F. M. A. DA COSTA, M. ROSA NUNES and L. M. PETER — 663 A study of the hexacyanoferrate redox couple at porous $BaSn_{0.9}Sb_{0.1}O_3$ perovskite electrodes

J. M. MARTINOVIC, D. B. SEPA, M. V. VOJNOVIC and A. DAMJANOVIC — 671 Nature of the rhodium rest potentials in oxygen saturated aqueous solutions

E. SUM and M. SKYLLAS-KAZACOS — 677 An electrochemical study of aluminium deposition from molten $NaF–AlF_3–Al_2O_3$ on a tungsten electrode

M. KAROLCZAK — 691 Comments on a paper by P. Nikitas: "On the derivation of the state equation in models of adsorption from solution" and some nuances of adsorption modelling

P. NIKITAS — 697 A reply to Karolczak's comments

Short Communications
S. C. YANG, M. B. CUTLIP and P. STONEHART — 703 Further development of an approximate model for mass transfer with reaction in porous gas-diffusion electrodes to include substrate effects

R. D. ARMSTRONG, K. AIREY and FANGTENG SU — 707 A comparison of calcium etidronate with other corrosion inhibitors for iron

F. D'Alba, S. Di Lorenzo and C. Lucarini — 709 Spontaneous oscillatory phenomena in iron corrosion by bromate

Book Reviews

D. Inman — 713 Advances in Molten Salt Chemistry 6. Edited by G. Mamantov, C. B. Mamantov and J. Braunstein

R. de Levie — 713 Biophysical Chemistry of Membrane Functions. By A. Kotyk, K. Janáček and J. Koryta

715 Electrochemical Calendar

JUNE

i I.S.E. Pages

719 Editorial

Review Article

A. Vértes and I. Czakó-Nagy — 721 Mössbauer spectroscopy and its application to corrosion studies

C. Fontanesi, M. Borsari, R. Andreoli, L. Benedetti, G. Grandi and G. Battistuzzi Gavioli — 759 Electrochemical behaviour of *N*-tosylglycine and *N*-dansylglycine in several solvents. The role of the RSO_2– groups on the physicochemical properties of glycine

D. J. Clarke, D. J. Schiffrin and M. C. Wiles — 767 A tetraphenylborate internal reference electrode for immiscible electrolyte solutions and ion selective electrodes

E. Ahlberg and M. Friel — 771 The cathodic polarization of iron in acidic acetonitrile–water solutions

C. Müller, R. Albalat, E. Gómez, M. Sarret and E. Vallés — 781 Two- and three-dimensional electrocrystallization of mercurous phthalate on a mercury electrode

C. Moina and D. Posadas — 789 Salt formation during the anodic dissolution of iron in $(NH_4)_2SO_4$ at pH = 2—II. Transient behaviour

B. Aurian-Blajeni, X. Beebe, R. D. Rauh and T. L. Rose — 795 Impedance of hydrated iridium oxide electrodes

G. Kokkinidis and G. Papanastasiou — 803 Electrocatalytic reduction of 4-nitropyridine-*N*-oxide on Pt/M (UPD) modified electrodes in aqueous acid solutions

F. Beck — 811 Wear mechanisms of anodes

R. G. Kelly, P. J. Moran, E. Gileadi and J. Kruger — 823 The passivity of iron in mixtures of propylene carbonate and water

M. M. Gómez, R. Motilla and E. Díez — 831 Adsorption of proline on a mercury electrode in neutral solution

J. W. Burgman and P. J. Sides — 841 On the use of rotating electrodes in the measurement of the diffusion coefficient of aluminum fluoride in cryolitic melts

P. J. Kulesza, T. Jedral and Z. Galus — 851 A new development in polynuclear inorganic films: silver(I)/"crosslinked" nickel(II)–hexacyanoferrate(III, II) microstructures

L. Tomcsányi, K. Varga, I. Bartik, G. Horányi and E. Maleczki — 855 Electrochemical study of the pitting corrosion of aluminium and its alloys—II. Study of the interaction of chloride ions with a passive film on aluminium and initiation of pitting corrosion

M. Makyta, K. Matiašovský and V. I. Taranenko — 861 Mechanism of the cathode process in the electrochemical synthesis of TiB_2 in molten salts—I. The synthesis in an all-fluoride electrolyte

M. Wakihara, T. Uchida, K. Suzuki and M. Taniguchi — 867 A rechargeable lithium battery employing iron Chevrel phase compound ($Fe_{1.25}Mo_6S_{7.8}$) as the cathode

A. Budniok and J. Kupka — 871 The evolution of oxygen on amorphous Ni–Co–P alloys

D. J. Blackwood, R. Greef and L. M. Peter — 875 An ellipsometric study of the growth and open-circuit dissolution of the anodic oxide film on titanium

G. ZOTTI, G. SCHIAVON, A. BERLIN and G. PAGANI — 881 The role of water in the electrochemical polymerization of pyrroles

Short Communications

J. A. JAÉN and B. FERNÁNDEZ — 885 Mössbauer spectroscopy study of steel corrosion in a tropical marine atmosphere

N. A. ANASTASIJEVIĆ and I. ROUŠAR — 887 Diffusion relaxation time of a thin layer cell with a disk electrode arrangement

G. HORANYI — 889 Some doubts about the occurrence of electrochemically induced nuclear fusion of deuterium

Book Reviews

H. GERISCHER — 891 Photoelectrochemical Solar Cells. By K. S. V. SANTHANAM and M. SHARON

J. V. DOBSON — 891 Measurement of Oxygen by Membrane-Covered Probes. By V. LINCK, V. VACEK, J. SINKULE and P. BENES

R. HAASE — 893 Irreversible Thermodynamics: Theory and Applications. By K. S. FØRLAND, T. FØRLAND and S. K. RATKJE

895 Electrochemical Calendar

JULY

i ISE Pages

V. KADYSH, J. STRADINS, H. KHANINA and G. DUBURS — 899 Electrochemical oxidation of 4-aryl-1,4-dihydropyrimidines on a carbon electrode

V. E. KAZARINOV, V. N. ANDREEV and A. V. SHLEPAKOV — 905 Composition and properties of the adsorption products of CO and CO_2 on platinized platinum

H. SCHOLL and K. SOCHAJ — 915 Cyclic voltammetry of some ferrocenephanes in non-aqueous solvents —II. Solvent effects

V. V. LOSEV, N. YA BUNÉ and L. E. CHUVAEVA — 929 Specific features of the kinetics of gas-evolving reactions on highly active electrodes

S. A. CAMPBELL and L. M. PETER — 943 A study of the effect of deposition current density on the structure of electrodeposited α-PbO_2

M. C. JIMÉNEZ, J. M. ALBELLA, I. MONTERO and J. M. MARTÍNEZ-DUART — 951 Influence of the series resistance on the constant voltage stage during anodization—II

J. R. BARREIRA RODRIGUEZ, A. COSTA GARCIA and P. TUÑON BLANCO — 957 Electrooxidation of methadone on carbon paste electrodes

SHAOJUN DONG and ZHE JIN — 963 Electrochemistry of indium hexacyanoferrate film modified electrodes

T. YAMAZAKI and T. KODERA — 969 Potential oscillation during anodic oxidation of hydrogen at a platinum electrode—I. Experimental

R. D. ARMSTRONG, W. G. PROUD and M. TODD — 977 The electrical double layer at the polymer–water interface

Y. SAKURAI, S. TOBISHIMA and J. YAMAKI — 981 Dependence of $Li/Cu_2V_2O_7$ cell characteristics on electrolytic properties

J. C. WANG — 987 Comments on a fractal model for blocking interfaces

Short Communications

D. SEELIGER, K. WIESENER, A. MEISTER, H. MARTEN, D. OHMS, D. RAHNER, R. SCHWIERZ and P. WUSTNER — 991 Search for DD-fusion neutrons during heavy water electrolysis

M. KEDDAM — 994 Some comments on the calorimetric aspects of the electrochemical "cold fusion" by M. Fleischmann and S. Pons

999 Electrochemical Calendar

AUGUST

4th FISCHER SYMPOSIUM

GUEST EDITOR: W. J. LORENZ

i ISE pages

E. BUDEVSKI, B. E. CONWAY, J. A. HARRISON, W. J. LORENZ, F. MANSFELD and E. SCHMIDT — 1003 Editorial

H. GERISCHER — 1005 Neglected problems in the pH dependence of the flatband potential of semiconducting oxides and semiconductors covered with oxide layers

R. CHRISTOPH, H. SIEGENTHALER, H. ROHRER and H. WIESE — 1011 *In situ* scanning tunneling microscopy at potential controlled Ag(100) substrates

E. BUDEVSKI, W. OBRETENOV, W. BOSTANOV, G. STAIKOV, J. DONEIT, K. JÜTTNER and W. J. LORENZ — 1023 Noise analysis in metal deposition—expectations and limits

N. BATINA, D. G. FRANK, J. Y. GUI, B. E. KAHN, C.-H. LIN, F. LU, J. W. MCCARGAR, G. N. SALAITA, D. A. STERN, D. C. ZAPIEN and A. T. HUBBARD — 1031 Oriented adsorption at well-defined electrode surfaces studied by Auger, LEED, and EELS spectroscopy

H. ANGERSTEIN-KOZLOWSKA, B. E. CONWAY, K. TELLEFSEN and B. BARNETT — 1045 Stochastically-gated surface processes involving anions in oxidation of Au: time-resolution of processes down to 0.25% coverages and 50 μs time-scales

A. J. ARVIA, R. C. SALVAREZZA and W. E. TRIACA — 1057 The development of metal overlayers with smooth and rough topographies

T. IWASITA, B. RASCH, E. CATTANEO and W. VIELSTICH — 1073 A SNIFTIRS study of ethanol oxidation on platinum

S. BOURKANE, C. GABRIELLI and M. KEDDAM — 1081 Study of electrochemical phase formation and dissolution by *ac* quartz electrogravimetry

V. D. JOVIĆ, A. R. DESPIĆ, J. S. STEVANOVIĆ and S. SPAIĆ — 1093 Identification of intermetallic compounds in electrodeposited copper–cadmium alloys by electrochemical techniques

E. KIROWA-EISNER, M. SCHWARZ and E. GILEADI — 1103 The temperature dependence of the Tafel slope—I. Instrumentation, calibration and a study of the reduction of hydroxylamine on the *dme*

A. PINKOWSKI, J. DONEIT, K. JÜTTNER, W. J. LORENZ, G. SAEMANN-ISCHENKO, T. ZETTERER and M. BREITER — 1113 Possible quantumelectrochemical effects on high T_c superconductors

M. W. BREITER — 1119 Transition from chemisorbed copper layers to bulk deposits on platinized platinum in sulfuric acid solution

F. MANSFELD, S. LIN, S. KIM and H. SHIH — 1123 Surface modification of Al alloys and Al-based metal matrix composites by chemical passivation

W. J. PLIETH, G. PFUHL, A. FELSKE and W. BADAWY — 1133 Photoetching of III/V semiconductors

J. P. VAN DER EERDEN, M. A. H. MICKERS, J. W. GERRITSEN and M. H. J. HOTTENHUIS — 1141 *In situ* observation of electrolytic growth of Ag by STM

G. KANNEN, S. A. BILMES and A. OTTO — 1147 Electroreflectance of "SERS-active" silver electrodes

J. Halbritter	1153	ARXPS analysis and oxidation of niobium compounds
M. Seo, X. C. Jiang and N. Sato	1157	Piezoelectric detection of interfacial change of gold electrode in relation to underpotential deposition of copper
N. Benzekri, M. Keddam and H. Takenouti	1159	*ac* Response of a rotating ring–disk electrode: application to 2-D and 3-D film formation in anodic processes
J. O. Zerbino, S. B. Saidman, J. R. Vilche and A. J. Arvia	1167	Ellipsometric data of cadmium oxide layers formed anodically in sodium hydroxide solutions
W. Visscher	1169	Investigation of metal deposition with ellipsometry
J. H. W. de Wit, J. A. L. Dobbelaar and J. H. Gerretsen	1175	The active–passive transition of chromium. *In situ* ellipsometry combined with cyclic voltammetry and impedance spectroscopy
P. Kurzweil, J. Ober and D. W. Wabner	1179	Method for extracting kinetic parameters from measured impedance spectra
Z. Stoynov	1187	Structural spectral analysis of electrochemical impedance
V. Bostanov and W. Obretenov	1193	Shape and growth rate of monoatomic layers during the electrocrystallization of silver on a screw-dislocation free (111) crystal face
M. Chomakova and S. Vitkova	1197	Metal microdistribution during Ni–Fe alloy deposition
J. Crousier and I. Bimaghra	1205	Electrodeposition of copper from sulphate and chloride solutions
W. Kautek and S. Birkle	1213	Aluminum-electrocrystallization from metal–organic electrolytes
I. Kristev, M. Nikolova and I. Nakada	1219	Spiral structures in electrodeposited silver–antimony alloys
R. Lacmann	1225	The electrodeposition of metals and alloys. The Ag/Pd/Cu system in perchloric acid experiments and modelling
C. Deslouis, G. Maurin, N. Pebere and B. Tribollet	1229	Kinetical and morphological effects during CdTe and Te electrocrystallization on electrohydrodynamical impedance
G. Sotirova, S. Sarnev and S. Armyanov	1237	Evolution of the included hydrogen, internal stress, microhardness and microstructure of electrodeposited cobalt
A. De Agostini, E. Schmidt and W. J. Lorenz	1243	A rotating ring–disk study of dissolved Cu(I) at the Cu/Cu(II) electrode in sulphate media
C. Cachet, B. Saïdani and R. Wiart	1249	A model for zinc deposition in alkaline electrolytes: inhibition layer and activation mechanism
D. M. Dražić, V. J. Dražić and V. Jevtić	1251	The slow adsorption of halide ions and some organics and their influence on corrosion rate determination from low polarization data
A. Frignani, M. Tassinari and G. Trabanelli	1259	Impedance measurements on Armco iron in acid solutions inhibited by S-containing additives
S. Kalwellis-Mohn and E. W. Grabner	1265	A secondary cell based on thin layers of zeolite-like nickel hexacyanometallates
J. C. Bazan, J. A. Harrison, G. Staikov, E. Schmidt, K. Jüttner and W. J. Lorenz	1271	Non-standard behaviour of the electronic conductor–solid ionic conductor interface
K. Wiesener, U. Eckoldt and D. Rahner	1277	The electrochemical behaviour of the lithium electrode in organic aprotic media in the presence of decaline
	1283	Electrochemical Calendar

SEPTEMBER

	i	ISE pages
R. D. Armstrong	1287	Editorial: the cold fusion debate

J. W. SCHULTZE, U. KÖNIG, A. HOCHFELD, C. VAN CALKER and W. KIES — 1289 Prospects and problems of electrochemically induced cold nuclear fusion

R. C. KAINTHLA, O. VELEV, L. KABA, G. H. LIN, N. J. C. PACKHAM, M. SZKLARCZYK, J. WASS and J. O'M. BOCKRIS — 1315 Sporadic observation of the Fleischmann–Pons heat effect

R. D. ARMSTRONG, E. A. CHARLES, I. FELLS, L. MOLYNEUX and M. TODD — 1319 Some aspects of thermal energy generation during the electrolysis of D_2O using a palladium cathode

S. M. BENNINGTON, R. S. SOKHI, P. R. STONADGE, D. K. ROSS, M. J. BENHAM, T. D. BEYNON, P. WHITHEY, I. R. HARRIS and J. P. G. FARR — 1323 A search for the emission of X-rays from electrolytically charged palladium–deuterium

L. KAVAN and M. GRÄTZEL — 1327 NAFION modified TiO_2 electrodes: photoresponse and sensitization by Ru(II)–bipyridyl complexes

J. PERAL, J. CASADO and X. DOMÉNECH — 1335 Competitive processes in photocatalysis. Phenol–sulphide and phenol–cyanide competitive photooxidation over ZnO

L. TAMISIER, P. BERNABEU, A. DE CESARE and A. CAPRANI — 1339 Responses to shear stress and to histamine addition of a cultured vascular endothelium—kinetic study using electrical impedance measurements

D. WAGNER and H. GERISCHER — 1351 The deposition and reoxidation of lithium on gold in the underpotential range from acetonitrile solutions with small amounts of water

T. KAWAI, C. IWAKURA and H. YONEYAMA — 1357 Electrochemical characteristics of poly(vinylferrocene) derivatives for battery application

A. EL JAMMAL, J.-C. VIRE, J.-M. KAUFFMANN et G. J. PATRIARCHE — 1363 Etude de la réduction électrochimique du clotiazépam en milieu aqueux et non-aqueux

F. LANTELME, A. DERJA, N. KUMAGAI et M. CHEMLA — 1371 Etude de la formation d'alliages superficiels par électrodepot d'aluminium sur des matrices de fer ou de nickel

Short Communication
J. STUMPER, H. J. LEWERENZ and C. PETTENKOFER — 1379 Photocurrent doubling at Si(111): analysis of the surface condition

1381 Electrochemical Calendar

OCTOBER

i I.S.E. Pages

x Editorial Announcement

J. GARRIDO, S. MAFÉ and V. M. AGUILELLA — 1385 Transport processes through membranes with gaseous electrodes

J. E. HARRIS and M. P. SORIAGA — 1387 Probing the surface electrochemical properties of electrodeposited metal layers by chemisorption of redox-active species: iodine on silver-plated platinum

Y. FUKUNAKA, T. YAMAMOTO and Y. KONDO — 1393 Ionic mass transfer associated with electrocrystallization of silver

D. J. BLACKWOOD, L. M. PETER, H. E. BISHOP, P. R. CHALKER and D. E. WILLIAMS — 1401 A SIMS investigation of hydrogen penetration of titanium electrodes

R. SCHREBLER, H. GÓMEZ and R. CÓRDOVA — 1405 The electrodeposition of rhenium species at the sub-monolayer level on a platinum electrode and its effect on formic acid electrooxidation

B. SMANDEK and H. GERISCHER — 1411 Photo- and electroluminescence on n-TiO_2 in an electrochemical cell

A. S. ROMAKHIN, YU. A. BABKIN, D. R. KHUSAINOVA, E. V. NIKITIN and YU. M. KARGIN — 1417 Competitive reactions method in electrochemistry. A new tool for investigating the anodic intermediates reactivity

R. MARÍN GALVÍN and J. M. RODRÍGUEZ MELLADO — 1425 Evidence of a previous protonation reaction in the electroreduction of isonicotinamide in basic media

H. VOGT — 1429 The problem of the departure diameter of bubbles at gas-evolving electrodes

E. CASASSAS, M. ESTEBAN, V. CERDÀ and F. BORRULL — 1433 Polarographic behaviour of several amidoximes and their copper(II) and mercury(II) complexes

K. CEDZYNSKA — 1439 Some properties of zinc–bromine cell electrolytes containing symmetrical ammonium bromides

A. E. BOHE, J. R. VILCHE, K. JÜTTNER, W. J. LORENZ and W. PAATSCH — 1443 Investigations of the semiconductor properties of anodically formed passive layers on Zn and of ZnO single crystals in different aqueous electrolytes by EIS

N. R. K. VILAMBI and E. J. TAYLOR — 1449 Quantitative detection of peroxide formation during oxygen reduction on platinum in alkaline media

A. D. ZDUNEK and J. R. SELMAN — 1455 Mass transfer and complexation in concentrated zinc/potassium halide electrolytes—I. Effective diffusivities

A. D. ZDUNEK and J. R. SELMAN — 1461 Mass transfer and complexation in concentrated zinc/potassium halide electrolytes—II. Complexation and migration effects

T. JACOBSEN, B. ZACHAU-CHRISTIANSEN, K. WEST and S. ATLUNG — 1473 Li insertion in Cu_yTiS_2 spinels

H. YABE, K. EMA and Y. ITO — 1479 Rotating ring disk electrode in molten chloride

Short Communication
K. OTSUKA, K. HOSOKAWA, I. YAMANAKA, Y. WADA and A. MORIKAWA — 1485 One-step oxidation of benzene to phenol applying a fuel cell system

Book Review
S. TRASATTI — 1489 Electrochemistry by P. H. RIEGER

1491 Corrigenda

1493 Electrochemical Calendar

NOVEMBER

i ISE pages

R. D. ARMSTRONG — 1497 Editorial

M. HEPEL and S. BRUCKENSTEIN — 1499 Tracking anion expulsion during underpotential deposition of lead at silver using the quartz microbalance

D. J. BLACKWOOD and L. M. PETER — 1505 The influence of growth rate on the properties of anodic oxide films on titanium

E. DUTKIEWICZ and J. STUCZYNSKA — 1513 The specific adsorption of naphthalenesulfonate ions at the mercury–electrolyte interface

B. RUDOLPH, W. BURCKHARDT and G. STAIKOV — 1519 Cyclic voltammetry studies of the lithiumthioborate glass–indium interface

E. AHLBERG and M. FRIEL — 1523 An *ac* impedance study of the electrochemical behaviour of iron in acidic acetonitrile–water solutions

A. D. HOLDING, D. PLETCHER and R. V. H. JONES — 1529 A chemical approach to the study of films on lithium in organic electrolytes for batteries

K. S. Aojula, J. D. Genders, A. D. Holding and D. Pletcher — 1535 Application of microelectrodes to the study of the Li/Li^+ couple in ether solvents—III

A. K. Sleigh and W. R. McKinnon — 1541 A new approach to the study of relaxation processes in electrochemical systems

S. Hyodo and K. Okabayashi — 1551 Raman intensity study of local structure in non-aqueous electrolyte solutions—I. Cation–solvent interaction in $LiClO_4$/ethylene carbonate

S. Hyodo and K. Okabayashi — 1557 Raman intensity study of local structure in non-aqueous electrolyte solutions—II. Cation–solvent interaction in mixed solvent systems and selective solvation

M. Cassir, C. Piolet, C. Moneuse and J. Devynck — 1563 Electrochemical characterization of oxygen systems in molten barium hydroxide at 500–700°C

D. M. Muir, P. Singh, C. C. Kenna and G. Senanayake — 1573 Hydrometallurgical thermodynamics—IV. Effect of dimethylsulfoxide on the activity of Cu^{2+} in chloride media and free energies of transfer of $CuCl_2^-$ and $AgCl_2^-$ from water to aqueous dimethylsulfoxide

L. Benedetti, M. Borsari, C. Fontanesi, G. Grandi, R. Andreoli and G. Battistuzzi Gavioli — 1581 The effect of lateral chains on the electrochemical and physicochemical behaviour of tosyl-*N*-protected aminoacids

S. Vitkova, I. Avramov, G. Raichewski, I. Varga, E. Kuzmann, I. Czakó-Nagy and A. Vértes — 1587 Relaxation and crystallization in electrodeposited $Fe_{31}Ni_{45}P_{23}$ amorphous alloys

H. Durakpasa, P. Linhardt and M. W. Breiter — 1591 Impedance studies of the cell Pt/Ag^+ conducting glass/Ag beta″ alumina/Pt

B. Wermeckes and F. Beck — 1595 Selective electrochemical cleavage of *N*-2-pyridyl-2,4-dimethylaniline(**1**) to 2-aminopyridine(**2**) and the quinol(**3**) at Ti/MnO_2- and Ti/RuO_2-anodes

J. Garche, D. Ohms, H. Dietz, N. D. Hung, K. Wiesener and W. Vielstich — 1603 Zum Zelldruck geschlossener Bleiakkumulatoren

Short Communications

P. K. Shen and Z. Q. Tian — 1611 Photoelectrochemical behavior of polyaniline in the presence of redox couple and electron acceptor

N. Djeghidjegh and J. Simonet — 1615 The cathodic cleavage of aromatic sulphones. When the fragmentation process is followed by an aromatic substitution by means of electrogenerated sulphinate as nucleophile

1619 Electrochemical Calendar

DECEMBER

i ISE pages

S. Trasatti — 1623 Editorial

Experimental Approaches

F. Chao, M. Costa, J. Lecoeur and J. P. Bellier — 1627 Interface electronic structure from ellipsometry coupled with differential capacity measurements (L)

J. M. Robinson and G. L. Richmond — 1639 Time resolved second harmonic generation studies of double layer reorganization: sulfate adsorption and desorption on a polycrystalline silver electrode (L)

O. Enea — 1647 Morphological and electrocatalytic properties of gold deposits on NaY zeolite

R. Durand, R. Faure, D. Aberdam and S. Traore — 1653 LEED and AES study of emersed platinum electrodes—a thermodynamic interpretation

L. D. Burke and K. J. O'Dwyer	1659	Mediation of oxidation reactions at noble metal anodes by low levels of *in situ* generated hydroxy species
F. Silva, C. Moura and A. Hamelin	1665	Formation of a monolayer of oxide on gold single crystal face electrodes in sulphamic acid solutions
S. Bordi, M. Carlà and R. Cecchini	1673	Surface tension measurements: toward higher accuracy
P. G. Dzhavakhidze, A. A. Kornyshev. A. Tadjeddine and M. I. Urbakh	1677	Potential dependence of the surface plasmon dispersion relation and the role of adsorption of anions at the electrochemical interface
A. Tadjeddine, A. Rahmani, G. Piazza and M. Costa	1681	Optical behavior of mercury films studied by surface plasmon excitation
W. Richtering and K. Doblhofer	1685	Effect of uncompensated resistance on large-amplitude chronoamperometric experiments
Semiconductors, Photoeffects and Modified Electrodes		
W. E. Spear and S. H. Baker	1691	Electronic properties of metal–amorphous silicon barriers and junctions (L)
L. R. Faulkner	1699	Structure and dynamics in modified electrodes (L)
B. Jovanić, Lj. Zeković, V. Urošević and B. Radenković	1707	Photoluminescence and molecular orbital theory in anodic oxide films formed on aluminium
W. A. Badawy, A. Felske and W. J. Plieth	1711	Electrochemical and photoelectrochemical behaviour of passivated Ti and Nb electrodes in nitric acid solutions
P. Allongue and E. Souteyrand	1717	Semiconductor electrode modifications: influence on the state distribution at the interface
P. Seta, E. Bienvenue, A. L. Moore, T. A. Moore and D. Gust	1723	Model systems for photosynthesis acting as photoinduced molecular wires in bilayers
H. J. Lewerenz, J. Stumper, C. Pettenkofer and R. Greef	1729	Photoelectrochemically synthesised interfacial oxides on silicon: composition and electronic properties
M. S. Hossain, D. Tryk and E. Yeager	1733	The electrochemistry of graphite and modified graphite surfaces: the reduction of O_2
N. Jaffrezic-Renault, H. Perrot and C. Nguyen van Huong	1739	Study of ionic adsorption on EOS structures by combining electroreflectance, photocurrent and capacitance measurements
A. K. Saraswat, A. Magistris, G. Chiodelli and P. Ferloni	1745	Electrochemical behaviour of the cell $Pb/PEO_{40} \cdot Pb(ClO_4)_2/Pb$
P. J. Kulesza and M. Faszynska	1749	Indium(III)-hexacyanoferrate(III, II) as an inorganic material analogous to redox polymers for modification of electrode surfaces
H. Kohler, W. Neu, K.-D. Kreuer, D. Schmeißer and W. Göpel	1755	$La_{0.175}WO_3$-perovskite: chemical characterization of the single crystal (111)/aqueous solution interface by XPS/UPS
M. Kozlowski, W. H. Smyrl, Lj. Atanasoska and R. Atanasoski	1763	Local film thickness and photoresponse of thin anodic TiO_2 films on polycrystalline titanium
J. W. Schultze and J. Thietke	1769	Local photocurrent and high power density investigations of oxide films on valve metals with a focused laser beam
Microscopic Aspects		
M. I. Urbakh	1777	Optical properties of rough electrodes (L)
B. E. Conway and S. Y. Qian	1785	State of hydration of the proton and the transition between molten-salt and aqueous-solution double-layer and kinetic behaviour (L)
Biological Systems		
M. Gutman and E. Nachliel	1801	The application of the laser induced proton pulse for studying electroneutral ion exchange across biomembranes (L)
R. Naumann	1807	Electrochemical aspects of biological energy conversion
M. Cappadonia and K. Doblhofer	1815	The electrical state of NAFION coated electrodes emersed from liquid electrolytes

Double Layer Structure: Theory and Modelling

An. M. Kuznetsov, R. R. Nazmutdinov and M. S. Shapnik	1821	Water adsorption—quantum chemical approach (L)
A. A. Kornyshev	1829	Metal electrons in the double layer theory (L)
K. Heinzinger and E. Spohr	1849	Computer simulations of water–metal interfaces (L)
Z. Koczorowski, I. Zagórska and A. Kalińska	1857	Differences between surface potentials of water and some organic solvents
M. Plischke and D. Henderson	1863	Pair correlation functions and the structure of the electric double layer
P. Nikitas and A. Pappa-Louisi	1869	Electrosorption from dilute solutions of solvents with asymmetric molecules
A. Harrach and A. Métrot	1877	Electrochemical intercalation into graphite seen as an electrocapillary process
F. Sanz and R. Gonzalez	1883	Theoretical considerations on the adsorption isotherm for ionic systems at electrode interphases
D. Schuhmann	1889	Improvements in the two-parallel-condenser model of the double layer in the presence of organic adsorption
Extended Abstracts of Other Lectures	1895	
	1909	Electrochemical Calendar